

REMARKS***Summary of the Amendment***

Upon entry of the above amendment, claims 1 and 18 will have been amended. Accordingly, claims 1 - 40 will remain pending and under consideration by the Examiner.

Summary of the Official Action

In the instant Office Action, the Examiner has rejected claims 1 - 40 over the art of record. By the present remarks, Applicants submit that the rejections have been overcome, and respectfully request reconsideration of the outstanding Office Action and allowance of the present application.

Interview with Examiners Ross and Cadugan

Applicants gratefully acknowledge the courtesy extended to their representative by Examiners Ross and Cadugan in conducting an interview on January 15, 2004. In the interview, the distinguishing features of the present invention were discussed, as well as amendments to the independent claims. The Examiner also clarified her interpretation of Figure 2 relative to the pending claims.

Amendment is Proper for Entry

Applicants submit that, as the instant amendment merely clarifies features of the claims, no question of matter nor any new issues are raised in the instant amendment. Moreover, Applicants submit that the instant amendment places the application in allowable form or at least places the application in better form for appeal by reducing the number of

issues.

With regard to independent claim 18, Applicants note that, in order to clarify the features of the invention, the phrase “in the region of said obtuse-angled [or acute-angled] corners” has been changed to “at said obtuse-angled [or acute-angled] corners.” Applicants note that, contrary to the Examiner’s assertions, WO ‘438 provides no disclosure that would lead one ordinarily skilled in the art to understand that the area identified by the Examiner as in the region of the obtuse-angled corners is in fact in the region of the obtuse-angled corner. In fact, WO ‘438 teaches the exact opposite.

In column 3, lines 2 - 5, WO ‘438 discloses that the acute angle is formed by two chipping faces having edge sections that merge into one another while forming an obtuse angle β *in the area of a roof-shaped tip 18*. In other words, while one ordinarily skilled in the art reviewing the disclosure of WO ‘438 would understand that the roof shaped tip 18 is in the region or area of angle β , there is no disclosure that the cutting edges leading to roof-shaped tip 18 are located in the region of the obtuse-angled corner, as asserted by the Examiner.

Thus, Applicants submit that the instant amendment to independent claim 18 has not been made to define over the art of record, but instead has been made in an effort to advance prosecution of the instant application. Moreover, as the instant amendment merely clarifies terminology, Applicants submit that entry of the amendment is proper, and that no estoppel

should be deemed to attach this amendment.

Applicants further note that independent claim 1 was amended to clarify that the term thickness is utilized in normal context.

Accordingly, Applicants request entry of the instant amendment and consideration of the remarks provided herein.

Traversal of Rejection Under 35 U.S.C. § 112, Second Paragraph

Applicants traverse the rejection of claims 1 - 17 under 35 U.S.C. § 112, second paragraph, as being indefinite.

By the present amendment to independent claim 1, Applicants have clarified the recitation of the thickness of the indexable tip. Thus, Applicants submit that independent claim 1, as well as claims 2 - 17 that depend therefrom, clearly and unambiguously recite the subject matter that the inventors regard as their invention.

Accordingly, Applicants request that the Examiner reconsider and withdraw the formal rejection of claims 1 - 17 under 35 U.S.C. § 112, second paragraph, and indicate that these claims are fully in compliance with the requirements of the statute.

Traversal of Rejection Under 35 U.S.C. § 102(b)

Applicants traverse the rejection of claims 18 - 21 and 39 under 35 U.S.C. § 102(b) as being anticipated by International Publication No. WO 98/51438 [hereinafter "WO '438"]. The Examiner asserts that WO '438 shows all of the recited features, including that a region

of the acute corner angle is thicker than a region of the obtuse corner angle. Applicants traverse the Examiner's assertions.

To anticipate the instant claims, the applied art must show each and every recited feature of the rejected claims. In this regard, Applicants note that, as WO '438 fails to disclose wherein a vertical distance from said supporting area to said cutting edges located at said obtuse-angled corners is less than a vertical distance from said supporting area to said cutting edges located at said acute-angled corners, as recited in claim 18, the applied art fails to anticipate claims 18 - 21 and 39.

As shown in Figure 1 of WO '438, Applicants note that the applied art fails to provide any disclosure of a vertical distance from said supporting area to said cutting edges located at said obtuse-angled corners is less than a vertical distance from said supporting area to said cutting edges located at said acute-angled corners, as recited in claim 18. In the interview of January 15, 2004, the Examiner responded to Applicants' position by pointing that, while not apparent, Figure 2 might show the recited features.

Applicants submit that, to anticipate the claims, the reference must unequivocally show the recited features of the rejected claims. Because Figure 2 fails to unquestionably show a vertical distance from said supporting area to said cutting edges located at said obtuse-angled corners is less than a vertical distance from said supporting area to said cutting edges located at said acute-angled corners, as recited in claim 18, Applicants submit that this

Figure cannot be considered as anticipatory. Moreover, Applicants submit that, as text of the WO '438 related to Figure 2 fails to provide any further information that would render this figure as anticipatory of the instant invention.

Because WO '438 fails to show each and every recited feature of at least independent claim 18, Applicants submit that the Examiner has failed to provide an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b). Therefore, Applicants submit that the rejection of at least independent claim 18 is improper and should be withdrawn.

Further, as it cannot be readily ascertained from Figure 2 of WO '438 whether or not the recited features of the instant invention are shown, Applicants submit that, at best, WO '438 is ambiguous with regard to this information. As such, Applicants submit that, it is well settled that an anticipation rejection cannot be predicated on an ambiguous reference. See *In re Turlay*, 304 F.2d 893, 134 USPQ 355 (CCPA 1962). Further, an anticipation rejection cannot be based upon teachings in a reference that are vague or based on conjecture. See *Datascope Corp. v. SMEC, Inc.*, 227 USPQ 838 (Fed. Cir. 1985). Thus, Applicants submit that the Examiner's is improperly relying upon an ambiguous reference, which renders the rejection improper.

Further, Applicants submit that claims 19 - 21 and 39 are allowable at least for the reason that these claims depend from allowable base claims and because these claims recite

additional features that further define the present invention. In particular, Applicants submit that WO '438 fails to anticipate each and every recited feature of claims 19 - 21 and 39.

Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of anticipation under 35 U.S.C. § 102(b) and indicate that claims 18 - 21 and 39 are allowable.

Traversal of Rejection Under 35 U.S.C. § 103(a)

1. WO '438

Applicants traverse the rejection of claims 22 - 24 and 31 - 38 as being unpatentable over WO '438. The Examiner asserts that the applied art discloses the recited ranges. Applicants traverse the Examiner's assertions.

Applicants note that, in addition to the above-noted discussion of WO '438, this document likewise fails to provide any teaching or suggestion that would render at least independent claim 18 unpatentable. That is, Applicants note that, as Figure 2 and its accompanying text is at best ambiguous with regard to the features of claim 18, WO '438 fails to provide any teaching or suggestion for rendering the instant invention obvious.

Applicants note that WO '438 fails to provide any teaching or suggestion of modifying the thickness the insert at the corners, nor is there any suggestion that it may be advantageous to form the insert to have different thickness at the obtuse-angled corners than at the acute-angled corner. As such, Applicants submit that this document cannot even

arguably suggest a vertical distance from said supporting area to said cutting edges located at said obtuse-angled corners is less than a vertical distance from said supporting area to said cutting edges located at said acute-angled corners, as recited in claim 18..

Therefore, Applicants submit that WO '438 fails to render unpatentable the combination of features recited in at least independent claim 18.

Further, Applicants submit that claims 22 - 24 and 31 - 38 are allowable at least for the reason that these claims depend from allowable base claims and because these claims recite additional features that further define the present invention. In particular, Applicants submit that WO '438 fails to teach or suggest the combination of features recited in at least claims 22 - 24 and 31 - 38.

Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of anticipation under 35 U.S.C. § 103(a) and indicate that claims 22 - 24 and 31 - 38 are allowable.

2. Over WO '438 in view of Hale

Applicants traverse the rejection of claims 25 - 38 under 35 U.S.C. § 103(a) as being unpatentable over WO '438 in view of HALE (U.S. Patent No. 4,776,732). While acknowledging that WO '438 fails to teach the recited orientation of the cutting edges relative to the support area, the Examiner asserts that HALE discloses such a feature and that it would have been obvious to modify WO '438 to include such a feature. Applicants

traverse the Examiner's assertions.

As noted above, WO '438 fails to teach or suggest the combination of feature related to the insert recited in at least independent claim 18. Similarly, Applicants submit that HALE fails to teach or suggest the above-noted features of at least independent claim 18.

Because both applied documents fail to teach or suggest a vertical distance from said supporting area to said cutting edges located at said obtuse-angled corners is less than a vertical distance from said supporting area to said cutting edges located at said acute-angled corners, as recited in claim 18, Applicants submit that no proper combination of these documents can even arguably render unpatentable the instant invention.

Further, Applicants submit that claims 25 - 38 are allowable at least for the reason that these claims depend from allowable base claims and because these claims recite additional features that further define the present invention. In particular, Applicants submit that no proper combination of WO '438 and HALE teaches or suggests the combination of features recited in at least claims 25 - 38.

Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection under 35 U.S.C. § 103(a) and indicate that claims 25 - 38 are allowable.

3. Over WO '438 in view of Shaffer

Applicants traverse the rejection of claims 1 - 17 and 40 under 35 U.S.C. § 103(a) as being unpatentable over WO '438 in view of SHAFFER (U.S. Patent No. 6,464,433). The

Examiner asserts that, while WO '438 shows a thickness of the indexable tip from support surface to acute corner angles being greater than the thickness from the support surface to obtuse corner angles, there is no teaching of the tool. However, the Examiner asserts that SHAFFER discloses a tool having the recited features, and that it would have been obvious to combine the tip of WO '438 with the tool of SHAFFER. Applicants traverse the Examiner's assertions.

Applicants note that WO '438 likewise fails to teach or suggest the expressly recited features of indexable tip thickness, as recited in at least independent claims 1 and 40. That is, Applicants submit that WO '438 fails to provide any teaching or suggestion of an indexable tip thickness from said support surface to upper extents of said acute corner angles opposite said support surface is greater than a thickness of said indexable tip from said support surface to upper extents of said obtuse corner angles opposite said support surface, as recited in at least independent claim 1.

Moreover, Applicants submit that WO '438 fails to provide any teaching or suggestion of a cutting tool body. To address this defect of WO '438, the Examiner has cited SHAFFER. However, Applicants note that SHAFFER does not even arguably teach or suggest the recited features related to thickness, as recited in claim 1.

Because neither applied document teaches or suggests the above-noted features of thickness, Applicants submit that no proper combination of these documents can render

unpatentable the instant invention. Thus, the rejection is improper and should be withdrawn.

Further, Applicants note that the art of record fails to provide any teaching or suggestion that one ordinarily skilled in the art would find it obvious to combine the tip of WO '438 with the tool body of SHAFFER. That is, Applicants note that it is not apparent from the art of record that replacing the cutting insert of SHAFFER with the indexable tip of WO '438 would enable SHAFFER to operate in its intended manner. In particular, Applicants note that problems would appear to arise in balancing the cutting edges of the insert of WO '438 when operated in the SHAFFER device. Thus, the asserted combination would appear to create vibrations and/or prevent precision cuts intended by SHAFFER and/or WO '438.

Moreover, it is well known in the art that performance and tool life of a cutting insert is highly sensitive to geometry, and that little changes in cutting edge geometry can cause dramatically shortened tool life. Applicants note that, as the Examiner's asserted combination of documents fails to consider the adverse effects that arise through the asserted combination of WO '438 and SHAFFER, the art of record fails to render the Examiner's asserted combination obvious.

Accordingly, Applicants submit that the asserted combination of documents fails to teach or suggest the combination of features recited in at least independent claims 1 and 40, and that instant rejections are improper and should be withdrawn.

Further, Applicants submit that claims 2 - 17 are allowable at least for the reason that these claims depend from allowable base claims and because these claims recite additional features that further define the present invention. In particular, Applicants submit that no proper combination of WO '438 and SHAFFER teaches or suggests the combination of features recited in at least claims 2 - 17.

Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection under 35 U.S.C. § 103(a) and indicate that claims 1 - 17 and 40 are allowable.

Application is Allowable

Thus, Applicants respectfully submit that each and every pending claim of the present invention meets the requirements for patentability under 35 U.S.C. §§ 102 and 103, and respectfully request the Examiner to indicate allowance of each and every pending claim of the present invention.

Authorization to Charge Deposit Account

The undersigned authorizes the charging of any necessary fees, including any extensions of time fees required to place the application in condition for allowance by Examiner's Amendment, to Deposit Account No. 19 - 0089 in order to maintain pendency of this application.

CONCLUSION

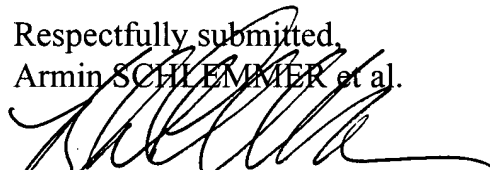
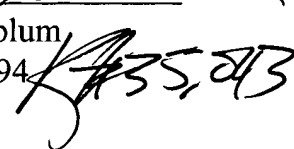
In view of the foregoing, it is submitted that none of the references of record, either

taken alone or in any proper combination thereof, anticipate or render obvious the Applicants' invention, as recited in each of claims 1 - 40. The applied references of record have been discussed and distinguished, while significant claimed features of the present invention have been pointed out.

Further, any amendments to the claims which have been made in this response and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

Accordingly, reconsideration of the outstanding Office Action and allowance of the present application and all the claims therein are respectfully requested and now believed to be appropriate.

Respectfully submitted,
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